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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,521	05/08/2007	Robert A. Grigsby Jr	81.636	2944

7590 09/18/2008
Legal Department
Huntsman Corporation
10003 Woodloch Forest Drive
The Woodlands, TX 77380

EXAMINER

WINKLER, MELISSA A

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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09/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/565,521	GRIGSBY JR ET AL.	
	Examiner	Art Unit	
	MELISSA WINKLER	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on May 8, 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/3/08 and 7/24/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

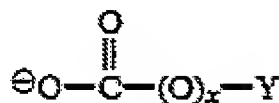
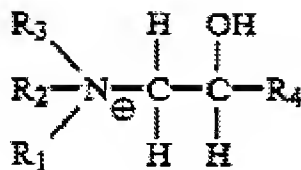
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 - 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,405,886 to Milliren et al.

Regarding Claims 1, 2, and 4. Milliren et al. teach a process of preparing a polyurethane foam in which a polyol and toluene diisocyanate are reacted in the presence of a catalyst, such as pentamethyldiethylenetriamine, and a quaternary ammonium salt of the formula below:

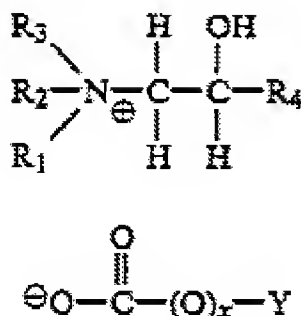


where R₁, R₂, and R₃ may each be a C₁ to C₂₀ alkyl or hydroxyalkyl groups, R₄ may be a hydrogen, and x is zero or 1. The catalyst is present in an amount of 0.005 to 1.5% by weight based upon the amount of polyol while the quaternary ammonium salt is present in an amount of 0.05 to 2.0% (Column 2, Line 24 – Column 3, Line 29; Column 5, Lines 7 - 48).

Regarding Claims 3 and 6. Milliren et al. teach the process of Claim 1 wherein water is used as a blowing agent in an amount of 1.5 to 7 parts based on 100 parts polyol (Column 2, Lines 46 – 48).

Claims 7 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,405,886 to Milliren et al.

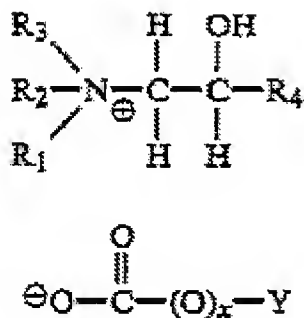
Regarding Claims 7 and 8. Milliren et al. teach a reaction mixture comprising water, a catalyst such as pentamethyldiethylenetriamine, and a quaternary ammonium salt of the formula below:



where R₁, R₂, and R₃ may each be a C₁ to C₂₀ alkyl or hydroxyalkyl groups, R₄ may be a hydrogen, and x is zero or 1 (Column 2, Line 24 – Column 3, Line 29; Column 5, Lines 7 – 48; Column 6, Lines 64 - 65).

Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by US 5,405,886 to Milliren et al.

Regarding Claim 9. Milliren et al. teach a reaction mixture comprising a blowing agent such as acetone and a quaternary ammonium salt of the formula below:



where R₁, R₂, and R₃ may each be a C₁ to C₂₀ alkyl or hydroxyalkyl groups, R₄ may be a hydrogen, and x is zero or 1 (Column 2, Line 24 – Column 3, Line 29; Column 4, Lines 49 - 68).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,405,886 to Milliren et al., as applied to Claim 1 above, and further in view of US 5,872,156 to Inazawa et al.

Regarding Claim 5. Milliren et al. teach the process of Claim 1 but do not teach potassium ions are present in the reaction mixture. However, Inazawa et al. also teach a polyurethane foam prepared from a tertiary amine catalyst and a metallic catalyst such as potassium octylate (Column 4, Line 64 – Column 5, Line 27). In Example 5, the amount of potassium ions provided by the potassium octylate catalyst solution represents roughly 0.2% by weight of the total polyurethane foam-forming mixture (Table 1 and Column 9, Lines 1 - 19). Milliren and Inazawa et al. are analogous art as they are from the same field of endeavor, namely polyurethane foams. At the time of invention, it would have been obvious to a person of ordinary skill in the art to use a metallic catalyst such as potassium octylate, as taught by Inazawa et al., in conjunction

with the tertiary amine catalyst in the invention taught by Milliren et al. The motivation would have been that replacing atleast some of the conventional tertiary amine catalyst with the metallic catalysts taught by Inazawa et al. would provide for a lower-fuming polyurethane foam (Inazawa et al., Column 10, Lines 1 - 6).

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELISSA WINKLER whose telephone number is (571)270-3305. The examiner can normally be reached on Monday - Friday 7:30AM - 5PM E.S.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571)272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo, Ph.D./
Supervisory Patent Examiner, Art Unit 1796
15-Sep-08

MW
September 15, 2008